

Section 851—Structural Steel

851.1 General Description

This section includes the requirements for the grade and toughness of structural steel.

851.1.01 Related References

A. Standard Specifications

[Section 106—Control of Materials](#)

B. Referenced Documents

ASTM A 673/A 673M

ASTM A 709 (ASTM A 709M)

ASTM E 23

851.2 Materials

851.2.01 Structural Steel

A. Requirements

1. Type

Use the structural steel grade specified in the Plans. Ensure the steel meets all requirements of the governing ASTM or AASHTO specification, this Specification, and Plan requirements.

Ensure that all steel submitted as main load-carrying member components subject to tensile stress meets either S83 or S84 of ASTM A 709 (ASTM A 709M).

2. Certification

Certify that the steel meets the requirements according to [Subsection 106.05, “Materials Certification.”](#)

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

1. Toughness Tests

Charpy V-Notch tests are mandatory for materials designated on the Plans as main load-carrying member components subject to tensile stress.

a. Sample the steel according to ASTM A 673/A 673M.

b. Perform the Charpy V-Notch test according to ASTM E 23.

D. Materials Warranty

General Provisions 101 through 150.